ABSTRACT OF THE DISCLOSURE

An electric motor driving system has a permanent magnet type synchronous motor, an inverter for driving the motor, a generator for issuing a rotational frequency command to the motor and a controller including a conversion gain for generating a control signal to the inverter on the basis of the rotational frequency command, an integrator, a zero generator, a qc-axis voltage command arithmetic unit, a dq inverter, a dq coordinate converter, a high-pass filter, and an adder, wherein the system includes the high-pass filter for correcting the rotational frequency command to the motor on the basis of current detection values flowing through the motor, and a step-out detector for comparing the correction amount with a threshold value previously set for the coordinate amount to judge when the correction amount exceeds the threshold value at least one or more times that the motor is in the step-out state.